



Applied Physics & OSA
Optics Seminar

Free Electron Lasers and E-Beam Radiation Sources

Prof. Avi Gover

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Abstract:

The physical principles and the state of the art of Free Electron Lasers and electron beam radiation sources will be reviewed. These devices can operate in the entire frequency regime, from microwaves to X-rays at very high intensities (MWatts range). At long wavelengths (THz regime), relatively compact sources of coherent radiation can be developed, based on stimulated and superradiant emission schemes. Varieties of these radiation sources are predicted to have important applications in scientific research (spectroscopy, holographic imaging of single bio-molecule), defense (anti-terrorist warfare, directed energy weapon) and industry (material and photochemical processing).

Brief Biography:

Professor Gover received his bachelors and masters degrees from Tel Aviv University, and his doctorate from Caltech in 1975. Professor Gover is the *Ludwig Jokel Electronics Chair Professor* in the Physical Electronics Department of Tel-Aviv University, and the head of the FEL Knowledge Center for Radiation Sources in Ariel. He is one of the pioneers in the field of Free Electron Lasers (FEL) since 1977. In recognition for his outstanding contribution (both theory and experiment) to FEL science and technology he was awarded in 2005 the annual International FEL prize. Professor Gover is also a Fellow of American Physical Society and IEEE.

Wednesday, February 20th, 2008.

4:00pm-5:00pm.

Watson 104

Refreshments will be available in the Watson Lobby at 3:45pm